

REMARKS

Claim 16 was pending in the Application. Claim 16 is an independent claim and claims 17-21 depend therefrom. Claim 22 is an independent claim and claims 23-27 depend therefrom. Claim 16 is currently amended. Claims 17-27 are new. Claims 1-15 were previously canceled. The Applicant respectfully requests that the application be reconsidered in view of the foregoing amendments and the following remarks.

Rejections Under 35 U.S.C. §102(e) – Wells

In point 3 on page 3 of the non-final Office Action, independent claim 16 was rejected under 35 U.S.C. §102(e) as being anticipated by Wells (U.S. Pat. Pub. No. 2004/0057624). Without acknowledging that Wells is prior art under 35 U.S.C. §102(e), the Applicant respectfully traverses the rejection for at least the following reasons.

With regard to the anticipation rejections, MPEP 2131 states that “[a] claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.” *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631 2 USPQ2d 1051, 1053 (Fed.Cir. 1987). MPEP 2131 also states that “[t]he identical invention must be shown in as complete detail as is contained in the ... claim.” *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989).

The Applicant sets forth in independent claim 16 a system for providing video. The system may comprise, among other things, a video decoder and a display engine, wherein the video decoder and the display engine are discrete components. The video decoder may further comprise, among other things, a decompression engine for decompressing compressed video data, thereby resulting in decompressed video data; and a deinterlacer for deinterlacing the decompressed video data, thereby resulting in deinterlaced video data. The display engine may comprise, among other things, a scalar for scaling the deinterlaced video data.

Wells is different from the Applicant's independent claim 16. Wells at least fails to disclose, for example, "a video decoder, said video decoder further comprising...a deinterlacer for deinterlacing the decompressed video data, thereby resulting in deinterlaced video data...wherein the video decoder and the display engine are discrete components," as set forth in Applicant's independent claim 16.

The Response to Arguments section of the non-final Office Action states that "Applicant states that in Wells post-processing stage includes a decoder, thus the decoder does not comprise a decoder." (Non-Final Office Action, Page 2, Point 2(a)). However, the non-final Office Action misstates the Applicant's arguments from Applicant's October 31, 2007 response. Applicant did not state that "Wells post-processing stage includes a decoder," as asserted in the Response to Arguments section of the non-final Office Action. Rather, the Applicant argued that Wells disclosed that the "post-processing stage is coupled to the video decoder" and therefore, post-processing stage and video decoder are separate. (See October 31, 2007 Response, Page 3, Last Sentence – Page 4 (emphasis added)).

To further clarify, Wells discloses an improved video decoding system and two embodiments of a video decoding system. In the improved video decoding system, a video decoder 12 is coupled to a scene classifier 104 and a deblocking filter 16 of a post-processing stage 102. The deblocking filter 16 is coupled to a (MC) temporal filter 106 of the post-processing stage 102, which is coupled to a de-interlacer 18 of the post-processing stage 102. The video decoder 12 has its own memory system 20. Further, each of the deblocking filter 16, (MC) temporal filter 106 and de-interlacer 18 has its own memory system 22a, 22c, 22b. (See Wells, FIGS. 3-4 and Paragraphs [0034]-[0041]).

In the first embodiment of Wells, a video decoder 202 is coupled to a scene classifier 104 of a post-processing stage 206 and an integrated deblocking, (MC) temporal filtering, (MC) de-interlacing stage 208 of the post-processing stage 206. The video decoder 202 has its own memory system 20. Further, the integrated deblocking filter, (MC) temporal filter, (MC) de-interlacer 208 shares a single MCTF & MCDI memory system 210. (See Wells, FIGS. 5-6, Paragraphs [0042]-[0046], and Claim 1).

In the second embodiment of Wells, a video decoder 302 is coupled to a scene classifier 104 and an integrated deblocking, (MC) temporal filtering, (MC) de-interlacing post-processing stage 208. The video decoder 302 and the integrated deblocking filter, (MC) temporal filter, (MC) de-interlacer post-processing stage 208 shares a single MCTF & MCDI memory system 210. (*See* Wells, FIGS. 7-8, Paragraphs [0047]-[0054], and Claim 17).

Each of the decoding systems disclosed in Wells teaches a separate video decoder coupled to a separate post-processing stage. Further, the de-interlacer in each of the decoding systems disclosed in Wells is separate from the video decoder and is instead part of the post-processing stage. Because the Office Action has failed to show “each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference” as required for an anticipation rejection under MPEP 2131, the rejection of claim 16 under 35 U.S.C. § 102(e) cannot be maintained.

Additionally, Wells teaches away from moving the de-interlacer from the post-processing stage into the video decoder for at least two reasons. First, Wells teaches saving system cost and processing latency by combining the deblocking, (MC) temporal filtering and (MC) de-interlacing into a single stage so that the motion vector, scene cut, and scene classification information can be shared by all post processing tasks. (*See* Wells, Paragraphs [0039]-[0040]). Thus, to realize the advantages of the Wells decoding system, Wells teaches away from removing the de-interlacer of Wells from the post-processing stage and adding the de-interlacer to the video decoder. Second, Wells sets forth in an alternative embodiment, adding the deblocker to the decoder because, although it would “require[] a more expensive and capable decoder, information in the compressed bitstream itself can be used to improve deblocking.” (Wells, Paragraph [0043]). However, Wells fails to disclose alternative embodiments for adding the (MC) temporal filter and/or (MC) de-interlacer to the video decoder. By setting forth an alternative embodiment for adding the deblocker to the decoder but not disclosing alternative embodiments for adding the (MC) temporal filter and/or the (MC) de-interlacer to the decoder, Wells clearly intended for the de-interlacer to be integrated in the post-processing stage separate from the video decoder to realize the system cost and processing latency savings of the Wells decoding system. Because the Office Action has failed to show “each and every element as set

forth in the claim is found, either expressly or inherently described, in a single prior art reference” as required for an anticipation rejection under MPEP 2131, the rejection of claim 16 under 35 U.S.C. § 102(e) cannot be maintained.

Also, if the non-final Office Action is asserting that Wells discloses adding the post-processing stage into the video decoder (which it does not), then Wells would at least fail to disclose “a display engine, said display engine comprising: a scalar for scaling the deinterlaced video data; wherein the video decoder and the display engine are discrete components,” at least because Wells teaches “the post-processing stage further integrates format conversion and scaling functions....” (Wells, Paragraph [0041]). Because the Office Action has failed to show “each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference” as required for an anticipation rejection under MPEP 2131, the rejection of claim 16 under 35 U.S.C. § 102(e) cannot be maintained.

For at least the reasons set forth above, the Applicant respectfully asserts that claim 16 is allowable over Wells. The Applicant requests that the rejection of claim 16 under 35 U.S.C. §102(e), be withdrawn.

Because dependent claims 17-21 depend, directly or indirectly, from independent claim 16, and because claim 16 is allowable over Wells, the Applicant asserts that claims 17-21 are also allowable over Wells. The Applicant also submits that each of claims 17-21 is independently allowable as well.

Rejections Under 35 U.S.C. §103(a) – Reitmeier

In point 4 on pages 3-4 of the non-final Office Action, independent claim 16 was rejected under 35 U.S.C. §103(a) as being unpatentable over Reitmeier (U.S. Pat. No. 6,549,240). The Applicant respectfully traverses the rejection for at least the following reasons.

The Applicant sets forth in independent claim 16 a system for providing video. The system may comprise, among other things, a video decoder and a display engine, wherein the video decoder and the display engine are discrete components. The video decoder may further comprise, among other things, a decompression engine for decompressing compressed video data, thereby resulting in decompressed video data; and a deinterlacer for deinterlacing the decompressed video data, thereby resulting in deinterlaced video data. The display engine may comprise, among other things, a scalar for scaling the deinterlaced video data.

Reitmeier is different from the Applicant's independent claim 16. Reitmeier at least fails to disclose, for example, "a video decoder, said video decoder further comprising...a deinterlacer for deinterlacing the decompressed video data, thereby resulting in deinterlaced video data...wherein the video decoder and the display engine are discrete components," as set forth in Applicant's independent claim 16.

Applicants appreciate the Examiner's recognition "that Reitmeier does not disclose that the video decoder includes the deinterlacer...." (Non-Final Office Action, Response to Arguments, 2(b), Page 3). The Response to Arguments section of the non-final Office Action states, however, that "the examiner maintains that based upon KSR (no unexpected results) and the integration of parts case law, the prior art of record could have been modified to produce a combined system as claimed." (Non-Final Office Action, Response to Arguments, 2(b), Page 3). However, Reitmeier teaches away from moving the de-interlacer from the post-processing stage into the video decoder for at least three reasons.

First, Reitmeier sets forth in an alternative embodiment, adding the optional de-interlacer 130 to the vertical resizing unit 140 when the optional de-interlacer 130 is being implemented using the vertical interpolation, or line repetition approach disclosed in Reitmeier. (Reitmeier, Column 5, Lines 19-25). By setting forth an alternative embodiment for adding the optional de-interlacer 130 to the vertical resizing unit 140 but not disclosing alternative embodiments for adding the optional de-interlacer 130 to the decoder, Reitmeier teaches away from incorporating the optional de-interlacer 130 into the video decoder 120.

Second, the Applicants note that Reitmeier's de-interlacer 130 is "optional." (Reitmeier, Column 4, Line 47). Thus, certain embodiments do not use the optional de-interlacer 130 of Reitmeier and in those embodiments, Reitmeier clearly teaches away from adding the optional de-interlacer 130 to the video decoder 120.

Third, when the optional de-interlacer 130 is used and is not incorporated into the vertical resizing unit 140, Reitmeier teaches using the optional de-interlacer 130 to control video format with the vertical resizer 140 and the horizontal resizer 150 under the control of controller 200. (Reitmeier, Column 7, Lines 12-24). Thus, by teaching that the optional de-interlacer 130 is to be used with the vertical resizer 140 and the horizontal resizer 150 under the control of controller 200, Reitmeier teaches away from adding the optional de-interlacer 130 to the video decoder 120. Because Reitmeier teaches incorporating the optional de-interlacer 130 into the vertical resizer 140, using the optional de-interlacer 130 with the vertical resizer 140 and the horizontal resizer 150 under the control of the controller 200 to control video format, or not using the optional de-interlacer 130 at all, Reitmeier teaches away from adding the optional de-interlacer 130 to the video decoder 120. Therefore, Applicants submit that a rejection under 35 U.S.C. §103(a) cannot be maintained.

The Applicant respectfully submits that, for at least the reasons set forth above, Reitmeier fails to teach or suggest all of the limitations of Applicant's independent claim 16, and that a rejection of claim 16 under 35 U.S.C. §103(a) cannot be maintained. Therefore, Applicant respectfully requests that the rejection of claim 16 under 35 U.S.C. §103(a), be withdrawn.

Applicant respectfully submits that claims 17-21 are dependent claims that depend from claim 16. Because claim 16 is allowable, Applicant respectfully submits that dependent claims 17-21 are also allowable. The Applicant also submits that each of claims 17-21 is independently allowable as well.

New Claims

The present application adds new claims 17-27. New independent claim 22 is generally analogous to independent claim 16. New dependent claims 17-21 and 23-27 depend from claims 16 and 22, respectively. Thus, the Applicant submits that, for at least the reasons discussed previously with regard to claim 16, new claims 17-27 are allowable over each of Wells and Reitmeier as well. Additionally, the Applicant submits that each of claims 17-27 is independently allowable.

Final Matters

The non-final Office Action makes various statements regarding claim 16, 35 U.S.C. § 102(e), 35 U.S.C. § 103(a), the Wells reference, the Reitmeier reference, KSR v. Teleflex, In re Larson, In re Wolfe, one of ordinary skill in the art, etc. that are now moot in view of the above amendments and/or arguments. Thus, the Applicant will not address all of such statements at the present time. However, the Applicant expressly reserves the right to challenge such statements in the future should the need arise (e.g., if such statements should become relevant by appearing in a rejection of any current or future claim).

Applicant reserves the right to argue additional reasons supporting the allowability of claim 16-27 should the need arise in the future.

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Response dated May 15, 2008

CONCLUSION

Applicant respectfully submits that that all of claims 16-27 are in condition for allowance, and requests that the application be passed to issue.

Should anything remain in order to place the present application in condition for allowance, the Examiner is kindly invited to contact the undersigned at the telephone number listed below.

Please charge any required fees not paid herewith or credit any overpayment to the Deposit Account of McAndrews, Held & Malloy, Ltd., Account No. 13-0017.

Dated: May 15, 2008

Respectfully submitted,

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